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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/875,888	06/08/2001	Takashi Yamamoto	1095.1187	9572

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EXAMINER

PAPPAS, PETER

ART UNIT	PAPER NUMBER
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2671

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DATE MAILED: 02/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/875,888

Applicant(s)

YAMAMOTO, TAKASHI

Examiner

Peter-Anthony Pappas

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3 . 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Brittain et al. (U.S. Patent No. 6, 195, 098 B1).

3. In regards to claim 1 Brittain et al. teaches:

a. Rendering operations are used to calculate the correct two-dimensional (2-D) screen representation of three-dimensions objects (3-D), in which the rendering engine retrieves information for the objects of the scene. Said information includes Z (depth) and pixel color values. See column 4, lines 55-67. It is noted that 3-D geometric features are considered the same as characteristics of a 3-D object, such as an object's Z (depth) value(s) (i.e. for any given surfaces).

b. A video controller 108 and a display unit 114, in which display unit 114 is composed of 2-D pictures elements – pixels. Software can be used to render a 3-D representation of a scene on a 2-D display unit 114. See column 3, lines 57-67, column 4, lines 1-5, and Fig. 1.

c. One or more objects in a scene can be selected for manipulation through a user interface of system, 150. Once selected said objects are then flagged. The objects that are not selected cannot be manipulated. See column 5, lines 14-36. System 150

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comprising of a video control 180 and a display unit 182. See Fig 2. Said video controller 180 and display unit 182 can be considered the same as video controller 108 and display unit 114, respectively. See column 5, lines 9-11. It is noted that one or more objects, of a given scene, which may or may not represent a large object are considered a graphic element.

d. In regards to setting the identified geometric feature to a selected state for further manipulation the rationale disclosed in the rejection of limitation (c) of claim 1, in regards to the flagging of an object(s) for manipulation, is incorporated herein.

4. In regards to claim 4:

a. The rationale disclosed in the rejection of limitation (b) of claim 1 is incorporated herein in regards to the generating of a 2-D view of each of the 3-D geometric features of a 3-D model. It is noted that the rendering of a 3-D scene on a 2-D display unit is considered a 2-D view of the respective geometric features of said 3-D model after said rendering is complete.

Brittain et al. teaches that each 3-D object in a given scene is associated with a modifier stack containing digital information describing the appearance of the object. The rendering engine generates 2-D pixel data for the modifier stacks of objects in a scene. See column 2, lines 12-21. In addition, the modifier stack for a given object can be used to store the description of a bounding box that encloses that object. See column 5, lines 60-63. The rendering engine 162 utilizes the stored information in these modifier stacks to render a complete scene, which is displayed on a display unit 182.

See column 6, lines 15-21. It is noted that said display unit 182 is consider a 2-D display device.

b. In regards to the 3-D feature selection means the rationale disclosed in the rejection of limitations (c) and (d) of claim 1 are incorporated here. It is noted that the data maintained by the 2-D drawing generating means is considered the modifier stack for each object in a given scene. Therefore, it is maintained that because a modifier stack contains the 2-D data, for a respective 3-D object, any processing with respect to the 2-D embodiment of said 3-Dobject (i.e. 3-D feature selections mean in a 2-D environment) must access the corresponding modifier stack for relevant 2-D data so to allow for processing.

5. In regards to claim 6 Brittain et al. teaches a rendering engine 162 that is preferably a software module loaded in RAM or stored in ROM. See column 4, lines 55-58. It is noted that RAM and ROM are both considered computer-readable memory mediums. The rationale disclosed in the rejection of claim 1 is incorporated herein.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brittain et al., as applied to claims 1, 4 and 6, in view of Gantt (U.S. Patent No. 6, 016, 147).

8. In regards to claim 2 Brittain et al. fails to explicitly teach a set of orthographic projection views of a 3-D model. Gantt teaches a computer system 1200 that includes a display device or monitor 1202 for viewing a graphic environment. In addition Gantt teaches the display of four simultaneous drafting standard views of a 3-D design: 2101 (top), 2102 (front), 2103 (right side) and 2104 (isometric). See column 20, lines 42-60, Fig. 21 and Fig. 22. It is noted that said display device is considered a 2-D display, as it displays 2-D dimensional pixels, and views 2101, 2102 and 2103 of Fig. 21 are considered to be presented at a right angle to the viewer, through the use of said 2-D display device.

9. It would have been well known and obvious to one skilled in the art, at the time of the applicant's invention, to incorporate drafting standard views disclosed by Gantt for the 2-D display of 3-D objects/models/scenes, into the teaching of Brittain et al. so to add more interactivity to 3-D model manipulation performed a 2-D display device, because it would have been conventional do to do so as per said drafting standard views taught by Gantt so to further enhanced usability of CAD software on a 2-D display device.

10. In regards to claim 3 Brittain et al. teaches:

a. The rationale disclosed in the rejection of claim 2 is incorporated here. It is noted that for a given 2-D view, of an object which may comprise of other objects, the use of line of sight to designate the orientation of said 2-D view is inherent as the designation of a line of site is a fundamental requirement if said 2-D view is to be presented.

b. In regards to the graphic element selection means the rationale disclosed in the rejections of limitation (c) of claim 1 and claim 2 are incorporated here.

11. Claims 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brittain et al. (U.S. Patent No. 6, 195, 098 B1), as applied to claims 1-4 and 6.

12. In regards to claim 5 the rationale disclosed in the rejection of limitations (c) and (d) of claim 1 are incorporated herein. In addition, Brittain et al. teaches that selection of an object can be embodied by the action of a designer holding down a mouse button when a cursor is located within the boundary of a desired object. Furthermore if an object located in a scene is not selected then system 150 continues to render the scene. However, if an object is selected a flag is set and the scene with the selected object removed is then rendered. See column 6, lines 21-45.

13. While Brittain et al. does not explicitly teach having an identified geometric feature appear with emphasis it would have been well known and obvious to one skilled in the art, at the time of the applicant's invention, that by isolating a selected object or objects for manipulation, i.e. through use of a mouse cursor and thus separating said object or objects from the rendering process, would give emphasis to said identified geometric feature, because it would be represented in a different state, i.e. selected or not present, then that of any other given object or objects in the same scene.

Conclusion

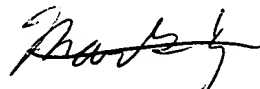
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter-Anthony Pappas whose telephone number is 703-305-8984. The examiner can normally be reached on M-F 8:15am-5:45pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Zimmerman can be reached on 703-305-9798. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.



Peter-Anthony Pappas
Examiner
Art Unit 2671

PAP



MARK ZIMMERMAN
SUPERVISORY PATENT EXAMINER
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